

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

WSOU INVESTMENTS, LLC d/b/a  
BRAZOS LICENSING AND  
DEVELOPMENT,

Plaintiff,

V.

HUAWEI TECHNOLOGIES USA INC.,  
*et al.*,

Defendants.

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CIVIL ACTION No. 6:20-CV-541-ADA  
CIVIL ACTION No. 6:20-CV-544-ADA

**DEFENDANTS' SUR-REPLY CLAIM CONSTRUCTION BRIEF**

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**TABLE OF EXHIBITS**

<b>Exhibit</b>	<b>Description</b>
Ex. A	Defendants' Identification of Extrinsic Evidence (6:20-cv-533 through 6:20-cv-544)

**TABLE OF PROPOSED CONSTRUCTIONS****I. U.S. PATENT NO. 8,429,480 (“THE ’480 PATENT”) (CASE NO. 6:20-CV-00544)****A. “hybrid automatic repeat request process” (claims 1, 2, 5, 6, 7, 9, 11-19)**

<b>Huawei’s Proposed Construction</b>	<b>WSOU’s Proposed Construction</b>
“process implementing a stop and wait protocol and soft combining where in the uplink a UE adjusts the PUSCH transmission according to PDCCH and/or PHICH information as detected by the UE”	Plain and ordinary meaning

**B. “the resources are persistently allocated for transmitting the new uplink packet transmission” (claim 2)**

<b>Huawei’s Proposed Construction</b>	<b>WSOU’s Proposed Construction</b>
Indefinite	<del>Plain and ordinary meaning</del> <b><u>a method step executed after a method step in claim 1</u></b>

**II. U.S. PATENT NO. 9,084,199 (“THE ’199 PATENT”) (CASE NO. 6:20-CV-00541)****A. “associated with a quality of the received CQI” (claims 1, 9) / “associated with a quality of the received channel quality indicator (CQI)” (claim 15)**

<b>Huawei’s Proposed Construction</b>	<b>WSOU’s Proposed Construction</b>
“associated with a quality of the received CQI channel”	Plain and ordinary meaning

**B. “dynamically adjust a CQI channel configuration based on the comparison” (claims 1, 9)**

<b>Huawei’s Proposed Construction</b>	<b>WSOU’s Proposed Construction</b>
“a closed-loop process which dynamically adjusts a CQI channel configuration based upon the comparison of the short term or long term quality metrics”	Plain and ordinary meaning

- C. “generated by filtering frame based quality metrics over a plurality of frames” – (claim 1) / “generated by filtering frame based quality metrics over a period of more than one frame” (claim 9)**

<b>Huawei’s Proposed Construction</b>	<b>WSOU’s Proposed Construction</b>
“created by processing frame based quality metrics over a plurality of frames in order to reject those long-term soft decision quality metrics that are unwanted”	Plain and ordinary meaning

- D. “means for generating soft decision quality metrics from a decoding process for received channel quality indicator (CQI)” (claim 9)**

<b>Huawei’s Proposed Construction</b>	<b>WSOU’s Proposed Construction</b>
<p>Subject to 35 U.S.C. § 112, ¶ 6</p> <p>Structure: a base station that includes a CQI recovery/decoding unit, a CQI metric generation unit using the algorithm(s) of 13:58-15:38, and equivalents thereof.</p>	<p>Subject to 35 U.S.C. § 112, ¶ 6</p> <p>Structure: CQI recovery/decoding unit; CQI metric generation unit; and equivalents thereof.</p>

Defendants Huawei Technologies USA Inc., *et al.*, (collectively, “Huawei”) respectfully submit this Sur-Reply Claim Construction Brief to Plaintiff’s (“WSOU’s”) Reply Claim Construction Brief (“Reply”) (*See, e.g.*, -00544, Dkt. 48).

**I. U.S. PATENT NO. 8,429,480 (“THE ’480 PATENT”) (CASE NO. 6:20-CV-00544)**

**A. “hybrid automatic repeat request process” (claims 1, 2, 5, 6, 7, 9, 11-19)**

WSOU again asserts that Huawei should be judicially estopped from advancing the present construction in view of a parallel IPR proceeding,<sup>1</sup> and that the present construction is unnecessary because WSOU’s infringement contentions have recited a “HARQ process.” *See* Reply at 1. Not surprisingly, WSOU fails to provide any authority to support its “judicial estoppel” requirement, or to produce WSOU’s infringement contentions to show why construction for the current term is allegedly unnecessary. As such, WSOU’s arguments should be disregarded.

The phrase “in the uplink a UE adjusts the PUSCH transmission according to PDCCH and/or PHICH information as detected by the UE,” is fully supported by both the specification and the 3GPP Standards. *See* Resp. at 3-4. WSOU contends that “Huawei’s citation indiscriminately encompasses a discussion of ‘a downlink subframe’ (5:45), even though the claim language in question is recited by an ‘uplink’ context.” Reply at 2. However, that very citation specifies that an *uplink* (PUSCH) transmission depends on a grant/assignment/PHICH info as received in a *downlink* subframe *i* – which is *fundamental* mechanism of a HARQ process, as shown below:

for a *downlink subframe i*, a transport block was transmitted in the associated *PUSCH subframe* then:

if an *Uplink Scheduling Assignment is received in subframe i* with *NDI toggled* .  
 . . a *new transmission* shall be indicated to the higher layers . . . else if an

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<sup>1</sup> WSOU argues that “Huawei cannot reasonably advance a claim construction here that it represented to the USPTO that ‘no party’ *has taken in litigation*.” Reply at 1 (emphasis added). In reality, the parties had not even exchanged the lists of claim terms to be construed at the time that Huawei’s IPR petition was filed. Thus, WSOU’s attempt to create an inconsistency in Huawei’s previous statement to the USPTO and Huawei’s claim construction positions in the present case falls flat.

*Uplink Scheduling Assignment is received in subframe i with NDI not toggled . . . a re-transmission* shall be indicated to the higher layers.

else if no Uplink Scheduling Assignment is received in subframe i, then: if *ACK is decoded on the PHICH*, ACK shall be delivered to the higher layers; else NACK shall be delivered to the higher layers.

'480 Patent, 5:45-59 (emphasis added); *see also* Resp., Ex. 2 (TS 36.213 v.8.3.0) at § 8.3 (UE ACK/NACK Procedure).

WSOU further asserts that “adjusts,” “PUSCH transmission,” “PDCCH information,” and “PHICH information” do not appear in the '480 Patent at 5:4-59. Reply at 2. No so. The above paragraph includes disclosures with respect to “PUSCH transmission” (transport block was transmitted in the associated PUSCH subframe), “PDCCH information” (uplink scheduling assignment), and “PHICH information” (ACK is decoded on the PHICH). This paragraph also discloses “adjusts,” as it specifies whether to transmit a new transmission or re-transmission in PUSCH depending on whether the uplink scheduling assignment is toggled with NDI. As to the issues regarding “stop and wait” and “soft combining,” WSOU completely ignores Huawei’s clarification. Those phrases are supported by the specification and the 3GPP Standards, and do not conflict with the opinions of Dr. Rysavy from the IPR, who did not attempt to “define” the current term in his Declaration. *See* Resp. at 2-6.<sup>2</sup>

**B. “the resources are persistently allocated ...” (claim 2)**

WSOU shows its desperation with regard to this term by arguing that “[b]ecause Huawei misidentified Mr. Proctor and opted to keep secret the *substance* of his testimony concerning

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<sup>2</sup> WSOU also argues that the 3GPP Standards is inapplicable because it is subject to change. *See* Reply at 3. However, the '480 Patent is directed to improving a HARQ process in 3GPP Standards, including TS 36.321 v8.2.0 and TS 36.213 v8.3.0, as recited by the specification. *See* '480 Patent, 4:54-65. The characteristics of evolving with time further justify the necessity of construing the current term based on the Standards documents that are recited by the applicants and dated around the same time as the filing date of the '480 Patent.



indefiniteness until the filing of Huawei’s response brief, the declaration of Mr. Proctor (Dkt. 46-5) should be disregarded.” Reply at 3 (emphasis in original). Notably, WSOU is silent about Huawei’s alleged “secrecy” with regard to Huawei’s other claim construction experts, even though all of Huawei’s experts were timely disclosed to WSOU *in exactly the same manner*. See Ex. A, Defendants’ Identification of Extrinsic Evidence (6:20-cv-533 through 6:20-cv-544), at 5-6.

Not only is WSOU’s argument with regard to Mr. Proctor’s disclosure a complete red herring, it is also incorrect. WSOU ignores the guidelines in the Court’s Order Governing Procedure (“OGP”), which states, in relevant part:

The parties shall disclose any extrinsic evidence, including the *identity* of any expert witness they may rely upon with respect to claim construction or indefiniteness. With respect to any expert identified, the parties shall identify *the scope of the topics* for the witness’s expected testimony. OGP, Dkt. 36, at 8 (emphasis added).

As effectively admitted by WSOU in its Reply Brief, Huawei timely identified the name of Huawei’s expert, and disclosed that he would give “testimony . . . on the indefiniteness of claim 2 of the ’480 Patent.” Reply at 3. As such, Huawei fully complied with the Court’s requirements regarding the disclosure of claim construction experts.<sup>3</sup>

Importantly, WSOU failed to offer any expert testimony or rebuttal to the testimony of James Proctor. As such, Mr. Proctor’s Declaration, where Mr. Proctor notes that a POSITA could not ascertain whether “the resources” in claim 2 are dynamically or persistently allocated, and thus claim 2 is invalid (*see* Resp., Ex. 5, at ¶¶ 37-45), stands completely un rebutted. Rather than proffer its own expert opinion, WSOU instead changes its construction to “a method step executed after a method step in claim 1” and arguing “[m]ethod steps need not each be executed

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<sup>3</sup> That Huawei mistakenly identified James Proctor Jr. as a “Ph.D” when he is not so, has no bearing on anything, and doesn’t merit a response.

simultaneously.” Reply at 4. However, WSOU’s new construction is nonsensical in view of the claim language in claims 1 and 2 (underlined) as shown together below.

detecting with a hybrid automatic repeat request function a collision between an uplink packet re-transmission and a new uplink packet transmission within a hybrid automatic repeat request process; and

in response, the hybrid automatic repeat request function ***dynamically allocating resources for transmitting the new uplink packet transmission*** in a different hybrid automatic repeat request process that does not collide with the uplink packet re-transmission, ***wherein the resources are persistently allocated for transmitting the new uplink packet transmission*** in the different hybrid automatic repeat request process.

First, claim 2 recites a wherein clause, in which “the resources” are further defined to be persistently allocated. Therefore, claim 2 does not recite a second method step to be executed after a method step in claim 1, as alleged by WSOU. As such, claim 2 is still indefinite because the dynamic and persistent allocations are mutually exclusive ways of resource allocations and so cannot be used with respect to the same resources. See Resp. at 7-10. Second, assuming *arguendo* that claim 2 recites a method step, it is unclear as to the sequential order of the steps in claims 1 and 2. See ’480 Patent, 7:59-67 (“dynamically schedules resources for transmitting the new UL packet transmission . . . in the method of the previous paragraph, resources may be persistently allocated for transmitting the new packet transmission.”). These disclosures as relied upon by WSOU only convey two possible meanings: (1) resources can be either dynamically scheduled or persistently allocated, and/or (2) the dynamically scheduled resources for transmitting the new UL packet transmission may be substituted with the persistently allocated resources. Nothing supports that an alleged step in claim 2 occurs *after* the step in claim 1. Third, persistently allocating the ***same*** resources ***again*** for transmitting “the ***same*** new uplink packet transmission” that has been transmitted as dynamically allocated to avoid collision does not make sense. WSOU’s proposal is thus nonsensical from a timing perspective and is not supported by the specification, including 7:59-67 as discussed above.

Moreover, WSOU's new proposal cannot be supported by the EP prosecution history of a European counterpart, as claimed by WSOU. *See* Reply at 4. There, in order to overcome clarity rejections, the applicant largely revised EP claim 2 to further claim that "the resource for the *re-transmissions* of the new uplink packet transmission are persistently allocated" (e.g., P2<sub>1</sub> in Fig. 3) – which is *not* present in U.S. claim 2, which only includes subject matter with respect to the new uplink packet transmission itself (e.g., P2<sub>0</sub> in Fig. 3). *See* Resp. at 8; *see also id.*, Ex. 7, at 2, 13. Therefore, the applicant made the statement as quoted by WSOU because a re-transmission (persistently allocated) has to occur after its corresponding new transmission (dynamically allocated) in a HARQ process. *See* Reply at 4 (citing Resp., Ex. 7).<sup>4</sup> Persistently allocating *different* resources for *different* transmissions (re-transmissions) after dynamically allocating resources for new transmissions cannot support WSOU's new proposal, and thus it should be rejected.

## II. U.S. PATENT NO. 9,084,199 ("THE '199 PATENT") (CASE NO. 6:20-CV-00541)

### A. "associated with a quality of the received CQI" (claims 1, 9) / "associated with a quality of the received channel quality indicator (CQI)" (claim 15)

WSOU characterizes this as a dispute between two meaningful interpretations. *See* Reply at 4-5. That is not accurate. In reality, this term as written is nonsensical on its face, requiring the step of generating "quality metrics" that are associated with "a quality" of the received "channel quality indicator." The channel quality indicator does not have an additional "quality," much less one to generate "quality metrics," and WSOU has pointed to no support for this sort of interpretation. Instead, per the specification of the '199 Patent, there are "CQI reports," which

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<sup>4</sup> In fact, the applicant went on to explain "[i]n other words, after the new sub-frame corresponding to another different HARQ process has been dynamically allocated for the new packet uplink transmission, the resource allocations *for the possible re-transmission of the same data* may be persistent." Resp., Ex. 7, at 13 (emphasis added).

carry “measurements of the Forward Link (FL) pilot energy at the wireless unit,” (’199 Patent at 1:33-35), and those reports are carried on a CQI channel (e.g., the Reverse-CQI Channel or R-CQICH). *See id.*, 1:25-31. The ’199 Patent makes clear that the alleged invention involves analyzing the quality of *the CQI channel* to dynamically adjust *the channel configuration*. *See, e.g., id.*, 3:21-23 (“Because the R-CQICH carries information for scheduling and cell switch, the quality of the R-CQICH may impact the overall system throughput and cell switch performance.”) Indeed, the *claims themselves* makes this clear, requiring that the dynamic adjustment is of the “CQI channel configuration,” and not simply the “CQI.” *Id.*, Claim 1.

WSOU’s default position that claim terms should be “taken as they appear” ignores that the claim is subject to a different interpretation that avoids the nonsensical result and reflects the actual purpose of the invention. *See In re Power Integrations, Inc.*, 884 F.3d 1370, 1376–77 (Fed. Cir. 2018) (the patent at issue “strives to eliminate unnecessary components,” so it would be unreasonable to construe a claim term to include a “bulky [component]”).<sup>5</sup> And WSOU’s unsupported argument that the Court should ignore the very purpose of the invention is plainly contradicted by the law. *See e.g., KEYnetik, Inc. v. Samsung Electronics Co. Ltd.*, 837 Fed.Appx. 786, 792 (Fed. Cir. 2020) (“To find otherwise would eviscerate the stated purpose of the claimed invention. As we recently reiterated, ‘[a] patent’s statement of the described invention’s purpose informs the proper construction of claim terms, including when the task is to identify the broadest reasonable interpretation.’”) (*quoting Kaken Pharm. Co. v. Iancu*, 952 F.3d 1346, 1352 (Fed. Cir. 2020)). Huawei’s construction makes sense of this otherwise nonsensical claim language, and

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<sup>5</sup> WSOU’s citation to *Chef America, Inc. v. Lamb-Weston, Inc.*, is inapposite because that case found that there was only *one* reasonable interpretation dictated by the claim language. *See* 358 F.3d 1371, 1374 (Fed. Cir. 2004). Such is not the case here, as the term “CQI” is associated with the indicator alone, the channel, and the reports.

aligns it with the balance of the claim limitations and with the specification of the ‘199 Patent, and thus should be adopted.

**B. “dynamically adjust a CQI channel configuration based on the comparison” (claims 1, 9)**

WSOU asserts that Huawei’s construction does not “define” the disputed term, and instead merely “repeats” the claim language and “inserts” two additional requirements. Reply at 5. This is again false. Huawei’s construction defines two separate concepts found in this contested claim term – what it means to “dynamically adjust” the CQI channel, and what the “the comparison” is based on given the antecedent basis required for the term.<sup>6</sup>

With respect to “dynamic adjustment,” as described in Huawei’s Responsive Brief, the sole disclosure of dynamic adjustment in the specification describes it as a “closed-loop process.” Resp. at 13-14.<sup>7</sup> WSOU attempts to rebut this language by pointing to other “example teachings” that are allegedly “relevant to this claim language,” with no further explanation. Reply at 6 (citing the ‘199 Patent, 3:55-63). However, WSOU ignores that this passage refers to the previously described “present techniques” for performing dynamic adjustment (*see id.*, 3:55), and that these “present techniques” similarly reflect a closed-loop process. Quality metrics are obtained by the base station from the CQI channel of the wireless device, then CQI channel configuration is adjusted through signals from the base station to the wireless device. *See id.*, 3:21-63. This is a closed-loop process: repeating channel analysis and configuration in a loop between the two

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<sup>6</sup> WSOU’s reference to a previously-filed IPR Petition is again inapposite. *See* Reply at 6. The Petition, filed in November 30, 2020, pre-dated any of the *Markman* disclosure dates here. Further, the Petition followed the PTAB’s guidance that claim terms need only be construed “to the extent necessary to resolve the controversy”; and as no terms were at issue for the grounds raised in the Petition, none were construed. Case No. 6:20-cv-00541, Dkt. 44-7, at 7.

<sup>7</sup> While WSOU rejects Huawei’s reliance on the prosecution history (*see* Reply at 6), the prosecution history demonstrates to the Court that Huawei is looking in the right place to understand the concept of “dynamic adjustment” given that the patent applicants similarly relied on this same passage when supporting this claim language. Resp. at 14.

devices. *See id.*, Fig. 1 (illustrating the loop between the base station and wireless unit). There is no disclosure in the specification of the '199 Patent that would suggest anything other than a closed-loop process for dynamically adjusting the channel configuration.

With respect to “the comparison,” WSOU does not dispute that the only “quality metrics” recited within the claims are the “short-term and long-term quality metrics.” Reply at 6. WSOU’s only response is that this list of quality metrics could be “open-ended.” *Id.* However, WSOU provides no reasoning or support from the specification or the claims for any *other* types of quality metrics. Moreover, WSOU’s interpretation (*see* Reply at 6), does not comport with the claim language. “The comparison” must be based on “at least one of” the quality metrics, and the quality metrics must comprise said “short term” and “long-term” metrics. '199 Patent, Claim 1. It necessarily follows that the “at least one of” language refers back to the defined list of quality metrics, and not otherwise undefined metrics as suggested by WSOU. As such, Huawei’s proposed construction should be adopted.

**C. “generated by filtering frame based quality metrics over a plurality of frames” – (claim 1) / “generated by filtering frame based quality metrics over a period of more than one frame” (claim 9)**

WSOU disputes that disclaimer has occurred with respect to “filtering” (*see* Reply at 7-8), but admits that the patent applicants stated during prosecution that filtering “*does not encompass the combination*” of techniques disclosed in Servais. *Id.* at 7. An explicit admission that the claim language does not include certain subject matter is a “clear and unmistakable” disclaimer.<sup>8</sup> The patent applicants told the PTO (and the public) that “filtering” did not cover certain techniques in

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<sup>8</sup> *See, e.g., Verizon Services Corp. v. Vonage Holding Corp.*, 503 F.3d 1295, 1307 (Fed. Cir. 2007) (finding statement that term “‘wireless’ *does not mean* ‘local wireless’” constituted clear and unmistakable disclaimer) (emphasis added).

order to get the claim allowed, and WSOU cannot now claw back those techniques into the scope of its claim through *Markman*.

Given that filtering cannot encompass simply “averaging” or “mapping” metrics, the question remains what is meant by the term. WSOU has not provided a satisfactory explanation, instead simply parroting back the claim language itself. Opening Brief at 12. The specification of the ’199 Patent describes the “long-term filter” as “process[ing]” signals, and that the long-term filter is “applied” to frame quality metrics, but does not otherwise define the term or describe how filtering is performed. *See* ’199 Patent, 11:33-45. Thus, Huawei proposed an ordinary definition corresponding to how a “filter” works (i.e., rejecting unwanted objects).<sup>9</sup> Huawei’s construction thus accords with the disclaimer, the specification, and the plain meaning and should be adopted.<sup>10</sup>

**D. “means for generating soft decision quality metrics from a decoding process for received channel quality indicator (CQI)” (claim 9)**

WSOU’s first complaint regarding the addition of a needed algorithm to Huawei’s proposed construction (*see* Reply at 8-9), has a simple explanation — upon further review, Huawei determined that the “decision making unit” did not provide adequate structure for this term, and that an algorithm was needed to provide to accomplish the claimed function. WSOU’s second complaint, that Huawei provided “no support for the algorithmic requirement” (Reply at 9), is false.<sup>11</sup> Huawei explicitly indicated the precedential reason that algorithmic structure was

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<sup>9</sup> Huawei has made no admission, tacit or otherwise, that its proposed construction “has nothing to do with the prosecution history.” Reply at 8. The dictionary cited by Huawei is wholly consistent with the prosecution history and the patent applicants associated disclaimer. A filter that rejects unwanted frames is not one that merely averages all of the frames together.

<sup>10</sup> WSOU once again raises the notion of an alleged difference between the two claims sought to be construed (*see* Reply at 8), but fails to raise any reason that “period” and “plurality of frames” operate differently with respect to filtering.

<sup>11</sup> Oddly, despite faulting Huawei, WSOU provides no expert support or other analysis as to why these two components are items that a POSITA would understand and not special purpose computers with a specific program.

required, given that the two identified units are special purpose computers. *See* Resp. at 19 (citing *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1352 (Fed. Cir. 2015) (*en banc*)). Indeed, Figure 8 describes how each of these elements is comprised of multiple modules and then defines lengthy algorithms and procedures that these components must carry out. *See, e.g.*, '199 Patent, Fig. 8, 11:4-45, 13:58-15:38. It is thus clear that these are computer elements that are specially designed to perform these tasks and require an algorithm to be implement the claimed function. Moreover, WSOU's argument that Huawei's proposed construction is tethered to the CQI metric generation unit *alone* (*see* Reply at 9), ignores Huawei's actual construction; it is the two elements together that require algorithmic support, and together perform the function using the specified algorithms.

Moreover, contrary to WSOU's complaint regarding the citation (*see* Reply at 9), the algorithms identified in the '199 Patent at 13:58-15:38 clearly correspond to the claimed function, beginning with the description of how the "CQI frame quality soft decision metrics are generated by the CQI metric generation unit 32." 13:58-59. This section then describes multiple algorithms corresponding to soft decision metrics, further corresponding to different situations with respect to the CQI Channel. *See id.*, 13:64-14:18 (during a "non-switching period"), 14:17-34 (during a "switching period"); 14:35-15:10 (for "differential mode" in different periods). Each of these different algorithms are required to understand and implement the full soft quality metric generation process.<sup>12</sup> Thus, for all the reasons set forth in Huawei's Responsive Brief and above, Huawei's proposed construction should be adopted.

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<sup>12</sup> WSOU's complaint regarding the inclusion of "(s)" in Huawei's construction (*see* Reply at 9-10), does not hold water. That portion of the specification includes multiple equations covering multiple situations, thus multiple "algorithms" are required to form the entire structure. Moreover, WSOU's citation to *Creo Products, Inc. v. Presstek Inc.*, further misses the mark, as that case applies to situations when the specification lays out *alternative* algorithms for performing a function. *See* 305 F.3d 1337, 1345 (Fed. Cir. 2002). Here, the specification makes clear that *each* of the algorithms is needed to provide soft decision metrics during different periods.



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**CERTIFICATE OF SERVICE**

I hereby certify that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system.

/s/ Jason W. Cook  
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